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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,777	11/10/2003	Robert D. Wachel	Intel 2207/906702	4393

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EXAMINER

LEE, BENNY T

ART UNIT PAPER NUMBER

2817

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/705,777

Applicant(s)

WACHEL, ROBERT D.

Examiner

Benny Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 November 2003.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 32-47 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 32-44 is/are rejected.  
7) ☒ Claim(s) 45-47 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

The disclosure is objected to because of the following informalities: In paragraphs [0014] & [0033], note that “1a-b” should be rewritten as --1a-1b-- for clarity of description. In paragraphs [0015] & [0041], note that “2a-b” should be rewritten as --2a-2b-- for clarity of description. In paragraph [0065], note that --(Fig. 1)-- should be inserted follow “110” & “119” for consistency of description. Appropriate correction is required.

The following claims have been found objectionable for reasons set forth below:

In claims 42, line 1 & claim 44, line 2, note that “the first” should be rephrased as --a first-- to avoid lack of antecedent basis.

In claim 44, line 1, note that “the second” should be rephrased as --a second-- to avoid lack of antecedent basis.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 32, 34, 35, 37-39, 41-44 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Marshall et al.

Marshall et al (Fig. 1) discloses a pair parallel of copper conductors (11, 12) etched onto a surface of a lower half of an insulated laminate board, which in combination with an upper half of the laminated board encompasses the pair of copper conductors as described at column 2, line 64 to column 3, line 6. As depicted in the alternate embodiment of Fig. 4, the encompassing laminate structure further includes upper vertical ground plane (115) disposed above the pair of copper conductors and lower vertical ground plane (116) disposed below the pair of copper

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conductors, and these ground planes are affixed to respective outer surfaces of the upper & lower half of the laminated boards. Additionally, side ground planes (120) are affixed to edges of the laminate board, such that one side ground plane is the left of one of the copper conductors while the other side ground plane is to the right of the other side ground plane. Note that the side ground planes are oriented perpendicular to the vertical ground planes as well as being oriented parallel to the pair of copper conductors, as to provide an overall grounding shield for the copper conductors.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 32-42, 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green et al.

Green et al (Fig. 11) discloses a differential pair of parallel conductors (1, 2) which is encased by a dielectric casing or body (4). Moreover, note that a ground shield (3) also surrounds the differential pair of conductors (1, 2). In particular, note that the ground shield comprises: side ground conductor portions which run parallel to the differential pair of conductors and which are respectively oriented to the left and the right of the differential pair of conductors (1, 2). Furthermore, note that semi-circular vertical ground conductor portions which are respectively above and below the differential pair of conductors are connected to the side ground plane portions. However, Green et al differs from the claimed invention in that the material of the

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differential pair of conductors (1, 2) is not explicitly specified as being copper and that specific dimensional parameters of the differential pair of conductors is not explicitly disclosed.

Accordingly, it would have been obvious in view of the references, taken as a whole, to have realized the differential pair of conductors as being formed of copper. Such a modification would have been obvious since copper is a well recognized conductive material used for signal conductors and that Green et al does suggest that copper is a preferred conductive material as indicated at page 4, left column, lines 44-46, thereby suggesting the obviousness of the modification. As for the specific dimensional recitations, such dimensions would have been considered obvious optimization of desired parameters within the purview of one of ordinary skill in the art, especially given the general conditions set forth for differential pair of conductors set forth by Green et al, thereby further suggesting the obviousness of such a modification.

Claims 33, 36, 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall et al.

Marshall et al discloses the claimed invention except for the specific dimensional parameters as recited in the above cited claims.

However, such dimensional would have been considered obvious optimization of desirable parameter within the purview of one of ordinary skill in the art, especially given the general conditions set forth for differential pair of conductors set forth by Marshall et al, thereby suggesting the obviousness of such a modification.

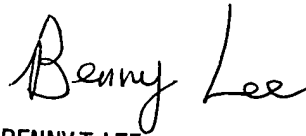
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Bobisch et al discloses a differential conductor pair (e.g. 1, 2) surrounded by a rectangular shape shielding structure.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number 571 272 1764.

B. Lee

A handwritten signature in cursive script that reads "Benny Lee". The signature is written in black ink and is positioned above the printed name and title.

BENNY T. LEE  
PRIMARY EXAMINER  
ART UNIT 2817